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ENDANGERED SPECIES TECHNICAL BULLETIN

Department of the Interior • U.S. Fish and Wildlife Service • Endangered Species Program, Washington, D.C. 20240

ANTIOCH DUNES ACQUIRED FOR BUTTERFLY AND TWO PLANT SPECIES

The Service has completed the emergency acquisition of more than 55 acres of a unique sand dune system that is home to an Endangered butterfly and two recently listed plants.

Situated along the southern shore of California's San Joaquin River, the Antioch Dunes constitute the only known habitat for the Lange's metalmark butterfly (*Apodemia mormo langei*), the Antioch Dunes evening-primrose (*Oenothera deltoides* ssp. *howellii*), and the Contra Costa wallflower (*Erysimum capitatum* var. *angustatum*). All three species hang precariously on the brink of extinction unless their habitat can be preserved and protected.

Many parties, including the two property owners, cooperated to expedite the acquisition—the first for an Endangered insect or plant—to forestall the development of a marina and halt sand mining imminently slated for the area. Options on the two parcels—41 acres owned by Mr. George Stamm and 14 acres owned by Mrs. Ethyl Sardis—were exercised and $2,135,000 in Land and Water Conservation Funds were used in the acquisition.

Photo by J. A. Powell

A Lange's metalmark lights upon Antioch buckwheat, its exclusive larval food source.

Background

Lying near the confluence of the Sacramento and San Joaquin Rivers just east of the town of Antioch, the Antioch Dunes is a remnant of a unique river sand dune system once covering close to 500 acres. Biologically, the area is considered a relict "island" containing the northernmost range of many plants and animals of desert affinities—their habitat once extending into the Central Valley in prehistoric times. Natural geological processes subsequent to the last glaciation reduced the desert habitat to a few small areas, with the northernmost sand dune community at Antioch.

Discovered entomogically in 1932, the area has since been characterized as having perhaps the highest concentration of distinct endemic insects in the United States. At least 24 identified species or subspecies have the Antioch Dunes as their type locality. Of these, 10 have never been discovered elsewhere, and another 6 are known only from other vulnerable locations in

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RECLASSIFICATION PROPOSED FOR THE LEOPARD

Michael Bender

With commercial exploitation of the leopard (*Panthera pardus*) now under better international control, the Service believes that reclassifying this species from Endangered to Threatened in portions of Africa would more accurately reflect its true status in the wild (F.R. 3/24/80).

Commercial traffic in its fur has always been considered the main threat to the leopard, and the proposal does not authorize any relaxation in commercial import prohibitions under the Endangered Species Act. Rather, the Service strongly recommends that the leopard be retained on Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), where its import and export would be strictly regulated.

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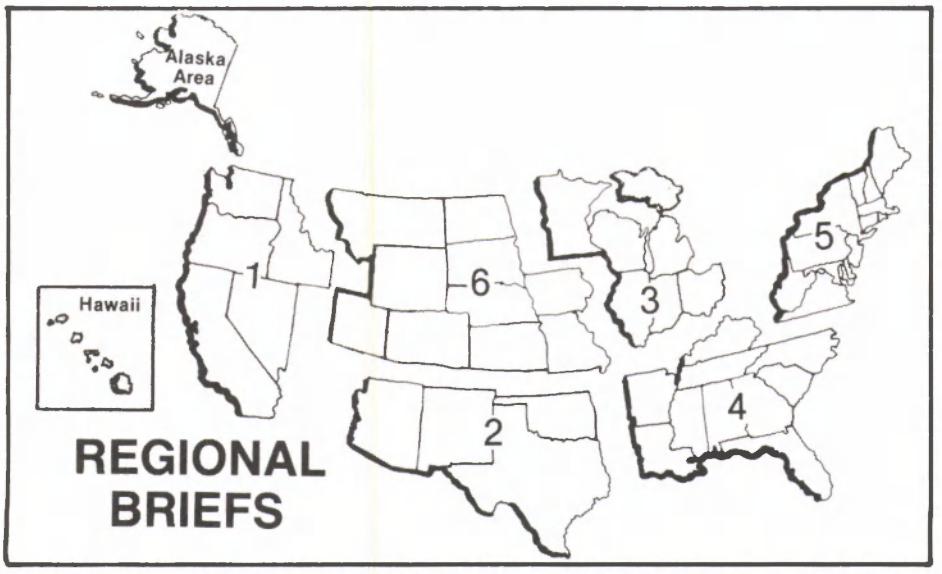

Endangered Species Program regional staffers have reported the following activities for the month of March.

Region 1. The Blunt-Nosed Leopard Lizard Recovery Plan has been sent to Washington for final approval. (For more information on activities in Region 1, see our stories on Antioch Dunes acquisition and recovery plan.)

Region 2. The region is making preparations to close the Beaumont, Texas, field office of the red wolf *(Canis rufus)* recovery program. Field activities will cease by May 1, and the facility will close by mid-July. Preparations are underway to declare the red wolf extinct in its final range of Louisiana and Texas. (Program emphasis will then be focused on captive propagation and eventual re-establishment in the wild.)

To further assess the status of Endangered fishes, staff members travelled to the Colorado River and Lake Mojave in an attempt to trammel-net bonytail chubs *(Gila elegans)* and razorback suckers *(Xyrauchen texanus)*. No bonytails were found; 22 razorbacks were tagged and released.

The Bald eagle *(Haliaeetus leucocephalus)* nesting study study on the Verde and Salt Rivers has begun. Dr. Ohmart of Arizona State University is conducting the research, which will extend into February 1981.

The following publications are available from the Albuquerque Regional Office: *The Mexican Wolf* (Endangered Species Report No. 8), and "The Houston Toad," first of a new series entitled "In Jeopardy: America's Endangered Species."

Region 3. Our Service met with the National Park Service, U.S. Forest Service, and Minnesota Department of Natural Resources to discuss mutual concerns including wolf management and prey species which affect the wolf.

Region 4. Tennessee Valley Authority personnel initiated this year's efforts to develop hatchery propagation techniques for the snail darter *(Percina tanasi)*. Egg taking and fertilization are being done by hand. Problems with selecting broodfish in peak spawning condition apparently led to poor initial results. Total eggs taken for the month were two larvae and 341 eggs which were still developing and offering prospects for improved results.

Region 5. The Peregrine Falcon Recovery Team has a new leader. Gene McCaffrey, New York Department of Environmental Conservation, replaces Rene Bollengier who served as team leader for the last four years.

Region 6. An Endangered Species Packet has been prepared as the result of a cooperative effort between our Service, the South Dakota Cooperative Extension Service, South Dakota Department of Game, Fish and Parks, and South Dakota State University. The packet contains pamphlets on the bald eagle *(Haliaeetus leucocephalus)*, black-footed ferret *(Mustela nigripes)*, swift fox *(Vulpes velox hebes)*, and whooping crane *(Grus americana)*. Also included is a whooping crane poster and two booklets: *Endangered and Threatened Species in South Dakota* and *Endangered and Threatened Fishes of South Dakota.*

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U.S. Fish and Wildlife Service Regions

Region 1: California, Hawaii, Idaho, Nevada, Oregon, Washington, and Pacific Trust Territories. **Region 2:** Arizona, New Mexico, Oklahoma, and Texas. **Region 3:** Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. **Region 4:** Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Puerto Rico, and the Virgin Islands. **Region 5:** Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia. **Region 6:** Colorado, Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming. **Alaska Area:** Alaska.

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The packet is available from the Denver Regional Office.

Alaska Area. The Area Office played host to an inter-agency Section 7 consultation workshop. Forty representatives from both Federal and State agencies attended.

Major changes in the Aleutian Canada goose *(Branta canadensis leucopareia)* recovery effort were recommended by the recovery team at its January meeting, and have been reviewed by the Service and implemented. Based on current biological data, the results from last year's experimental wild-bird transplants, and the previous propagation releases, the future emphasis will be on releases of stock obtained from the wild. The two approaches will be 1) capturing of wild adults and goslings on Buldir Island and transplanting that summer, and 2) pairing of wild adult males captured on California wintering grounds or on Buldir Island with propagated breeding age females until a firm pair bond is established. These pairs will then be released on target sites either as pairs in the spring, or with their broods in the summer.

Exemption Procedures and Application Regulations Issued

William Gill

Final rules governing exemption applications and describing the functions and procedures of review boards and the Endangered Species Committee have been published by the Departments of the Interior and Commerce.

The Endangered Species Act'Amendments of 1978 establish a procedure for obtaining exemptions from section 7 of the Endangered Species Act. This procedure was further clarified under the more recent amendments enacted on December 28, 1979. (See the October 1978 and January 1980 BULLETINS.)

Section 7 requires Federal agencies to insure, in consultation with the Secretary of the Interior or Commerce, that their actions are not likely to jeopardize the continued existence of Endangered or Threatened species or destroy or adversely modify their Critical Habitats. Applications for exemptions from this requirement may be made by a Federal agency, by the Governor of a State in which a proposed action would occur, or by a person whose permit or license application has been denied primarily because of section 7 considerations. An application for an exemption is to be directed in writing to the Secretary, who determines if it is properly presented. It is then evaluated by a specially-appointed review board and, if certain criteria are met, decided upon by the Endangered Species Committee.

Application Procedures

Under the newly published application regulations (F.R. 2/8/80), individuals or agencies qualifying for exemption consideration under Section 7(g) must submit a written application to the appropriate Secretary within 90 days of the termination of the consultation process (or within 90 days of the date the Federal agency takes final action concerning a permit or license application). Qualifying parties also have 90 days from March 10, 1980 (the effective date of the final rules), to apply for an exemption with regard to consultations previously completed.

The Secretary may reject an application for exemption that does not comply with all pertinent requirements within 10 days of receipt. A prehearing conference of the review board may be convened by the Secretary if he has questions concerning the applicant's compliance, and the application can be subsequently rejected if found inadequate. The Secretary of State must be notified and public notices published in the *Federal Register* concerning all applications.

Among the changes imposed under 1979 amendments are (1) specific inclusion of the 90-day filing deadline for license or permit applicants beginning after the date on which the concerned Federal agency takes final action; and (2) clarification of threshold responsibilities of the concerned Federal agencies and/or exemption applicant in review board proceedings under Section 7(g)(5). The final rules outline specifically the required contents of exemption applications for: (1) license or permit applicants whose permit or license was denied by a Federal agency primarily because of Section 7(a)(2); Federal agency applicants; and (3) applications from State Governors.

Additional changes were also incor-

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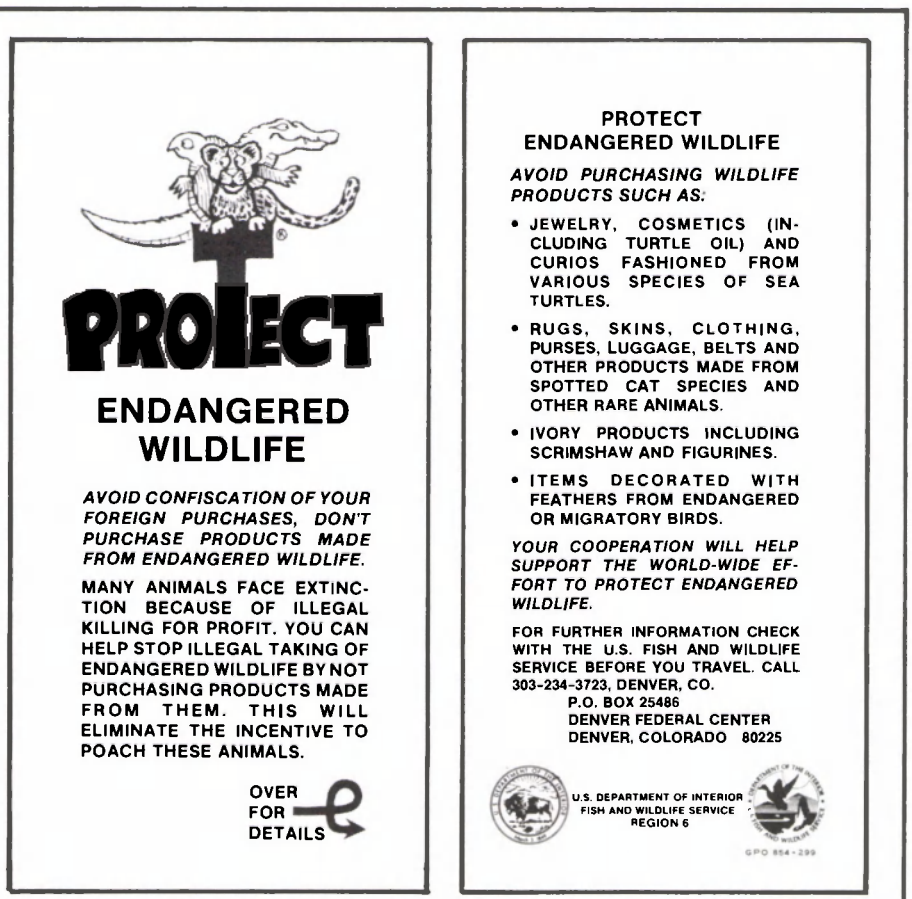

Frontier and Mexicana Airlines are providing copies of this leaflet, prepared by the Service, to passengers on their Mexican flights. Personnel from the Denver Regional Office report that the leaflets received a good response from the airlines and that Frontier has added them to their flights into Canada.

Exemption Regs

Continued from page 3

porated based on comments on the proposed rules. These include the publishing of notices of exemption applications received in the *Federal Register* and notification to the Council on Environmental Quality through the general *Federal Register* notice only.

Procedural Regulations

Regulations governing the procedures for the handling of applications by the review board and the cabinet-level Endangered Species Committee have been published (F.R. 4/4/80). (Interim rules had been published (F.R. 6/8/79) to guide the handling of pending exemption applications—see the July 1979 BULLETIN.)

The review board conducts a threshold review during which the applicant must bear the burden of proof on its position on each threshold criterion. A negative finding by the board (a determination that an irresolvable conflict does not exist, or that all other exemption requirements have not been met) constitutes final agency action. A positive finding results in referral to the Endangered Species Committee. The exemption process can also terminate if the Secretary of State certifies in writing to the Committee that granting an exemption or carrying out the proposed action would violate a treaty or other international obligation of the U.S.

The review board can conduct prehearing conferences and other meetings, which shall be advertised in the *Federal Register* and open to the public. Within 180 days of receipt of an application, the board must issue a report to the Endangered Species Committee addressing: (1) reasonable and prudent alternatives to the action, the nature and benefits of the agency action, and alternate courses of action consistent with conserving the species or its Critical Habitat; (2) whether or not the action is in the public interest and is of national or regional significance; and (3) appropriate mitigation and enhancement measures to be considered.

The Committee then reviews the report and make a final determination within 90 days of receipt of the board's report and records. If the Committee determines that an exemption should be granted, it will issue an order granting the exemption and specifying required mitigation and enhancement measures. (The Committee's decision will appear in the *Federal Register*.)

One major change resulting from the 1979 Amendments provides that any exemption granted by the Committee shall constitute a permanent exemption regarding all Endangered and Threatened species for purposes of completing the agency action, regardless of whether the species was identified in the biological assessment required under Section 7(c). The exemption will not be permanent, however, if: (1) the Secretary finds, based on the best scientific and commercial data available, that an exemption would result in the extinction of a species that was not the subject of a section 7 consultation or was not identified in any biological assessment, and (2) the Committee determines within 60 days after the date of the Secretary's finding that the exemption should not be permanent. If the Secretary makes a finding that the exemption would result in the extinction of a species, the Committee must meet with respect to the matter within 30 days after the date of the finding. (During the 60 day period following the Secretary's determination, the holder of the exemption must refrain from any action which would result in extinction of the species.)

PUBLIC INVITED TO MEETING PREPARATORY TO CITES 1981 CONFERENCE

Acting through the Service, U.S. Management and Scientific Authorities for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) have scheduled a public meeting to discuss the proposed agenda and other items in preparation for the forthcoming third biennial conference of CITES parties, to be held in New Delhi in February 1981.

Scheduled for June 2, from 9:30 a.m. to 12:30 in Room 5160 of the Main Interior Building, the meeting will provide a forum for the receipt of comments from the public on proposed agenda items (to be detailed in the *Federal Register* early in May), and on any proposed changes in the appendices lists of protected species under CITES (see accompanying notice). Procedures for the selection of U.S. delegates to the New Delhi conference and for observer participation at the meeting of the parties will also be discussed.

(Procedures for public participation in the development of U.S. positions for the 1981 meeting should also be published in the *Federal Register* some time in May.)

Those interested in more specific information and/or wishing to attend the May meeting should contact Mrs. Joan Anthony in the Service's Federal Wildlife Permit Office (703) 235–2418.

DATA SOUGHT ON POTENTIAL AMENDMENTS TO APPENDICES LISTS

The Service is soliciting comments and data with respect to additions or changes to the lists of protected species under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) for possible consideration at the third meeting of CITES parties (scheduled for February 1981 in New Delhi, India).

CITES is a 59-nation treaty regulating the import and export of animals and plants listed under three appendices. Appendix I includes species threatened with extinction that are or may be affected by trade. Appendix II includes species that, although not necessarily threatened with extinction, may become so unless trade in them is strictly controlled. (Species that must be subject to regulation in order that trade in other currently or potentially threatened species may be brought under effective control are also included under Appendix II.) Appendix III includes species that any party nation identifies as being subject to regulation within its jurisdiction, and for which it needs the cooperation of other parties in controlling trade.

Any party nation may propose amendments to Appendices I and II, which must be submitted to the CITES

INTER-AGENCY COOPERATION ASSISTS LAW ENFORCEMENT

Clare Senecal

Two memoranda of understanding, designed to help control growing wildlife crime and preclude duplication of enforcement efforts, were signed on March 19, 1980, by representatives of five Federal agencies involved in wildlife law enforcement. Signers represented the Departments of the Interior (Fish and Wildlife Service), Agriculture (Animal and Plant Health Inspection Service), Commerce (National Marine Fisheries Service), Treasury (Customs), and Justice (Land and Natural Resources Division).

The memoranda were initiated by an April 1979 White House directive to the Secretary of the Interior and the Council on Environmental Quality, which requested an assessment of Federal wildlife law enforcement efforts and the submission of recommendations outlining a mechanism to ensure more complete interagency cooperation. The need for enforcement efficiency was reemphasized in the President's August 1979 Environmental Message, and a Wildlife Law Enforcement Coordinating Committee was established shortly thereafter. (The Committee is chaired by a representative of the Service with members from the other four enforcement agencies.)

The first of the two memoranda of understanding provides for cooperation, as mutually agreed between the represented Departments, to promote enforcement efforts. The specific purposes of the Committee, as outlined in the agreement, include investigation of illegal trade in protected species to insure that such trade is actively investigated and violators prosecuted; the review of enforcement experience, problems and priorities of each involved agency; the coordination of Federal-trade enforcement policies generally; and, improved efforts in keeping heads of represented Departments better informed.

It was also agreed that the Committee would establish task forces to coordinate various wildlife investigations. The first such task force, to investigate Texas trade in wildlife, is formed by the second of the two subject memoranda. This group will focus its attention on law enforcement activity relating to illegal importation of wildlife and their parts or products from Mexico into the United States at Texas.

The Service plans to host a press conference in June of this year to report on the Texas task force and on other similar group efforts which are currently under way.

MAN CONVICTED IN BALD EAGLE VIOLATION

The longest sentence imposed for violation of a Federal wildlife law—three years in prison—has been handed down for a rural Blackduck, Minnesota, man who was convicted on March 4, 1980, of killing and selling a bald eagle. Charges against Emmett Carrigan, made in the U.S. District Court in St. Paul, culminated a year-long investigation by special agents of the U.S. Fish and Wildlife Service and Minnesota State authorities.

Carrigan acknowledged selling a bald eagle which he had killed to Service agents acting undercover, and was convicted on two counts—violations of the Migratory Bird Treaty Act and the Endangered Species Act of 1973, respectively. Carrigan had dealt in the illegal sale of bald eagles on previous occasions.

Secretariat 150 days in advance of the meeting for consideration by the parties. (Subsequent to responses by other parties, amendments are adopted by a two-thirds majority vote.)

Acting through the Service, the U.S. Scientific Authority and U.S. Management Authority for CITES are requesting information that may lead to the development of proposed amendments for consideration at the New Delhi meeting.

Generally, the following types of information are required for proposals:

1. **Taxonomy**
   - (a) Class
   - (b) Order
   - (c) Family
   - (d) Genus, species or subspecies, including author and year
   - (e) Common name(s), when applicable
   - (f) Code numbers, when applicable
2. **Biological data**
   - (a) Distribution (current and historical
   - (b) Population (estimates and trends)
   - (c) Habitat (trends)
3. **Trade data**
   - (a) National ultilization
   - (b) Legal international trade
   - (c) Illegal trade
   - (d) Potential trade threats
   - (i) Live specimens
   - (ii) Parts and derivatives
4. **Protection status**
   - (a) National
   - (b) International
   - (c) Additional protection needs
5. **Information on similar species**
6. **Comments from countries of origin**
7. **Additional remarks**
8. **References**

Please consult the April 4, 1980, Federal Register for additional guidance on appropriate submissions.

All information and comments should be submitted by June 3, 1980, to the Office of the Scientific Authority, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240. (Notices will appear in the *Federal Register* prior to official U.S. submissions requesting comments on proposed amendments and negotiating positions of the U.S. as well as amendments proposed by other party nations. All proposals must be communicated to the Secretariat by September 5, 1980.)

Service Acquires Antioch Dunes

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the Delta region or the northern Central Valley of California.

First described in 1938, Lange's metalmark butterfly occurs only on the Antioch Dunes, where its larvae feed exclusively on Antioch buckwheat *(Eriogonum nudum* var. *auriculatum).* Recent surveys show that only 10 acres on the "Stamm" parcel may contain sufficient buckweat stands to serve as hosts for the butterfly (with a population of less than 200 butterflies within this acquired area), while another stand of the vegetation extending onto adjacent dunes supports a second colony of about 250 metalmarks. The butterflies continue to survive at Antioch despite extreme drought in 1976–77, increased rototilling as a fire prevention measure, and a fire that destroyed most of one buckwheat colony in 1976.

[The Service will soon be reviewing the status of nine insects native to Antioch to determine whether Federal listing as Endangered or Threatened may be warranted. Species to be reviewed include the Middlekauff's katydid *(Idiostatus middlekauffi),* Antioch weevil *(Dysticheus rotundicollis),* Antioch robber fly *(Cophura hurdi),* Valley mydas fly *(Raphiomydas trochilus),* Antioch vespid wasp *(Leptochilus arenicolus),* Antioch tiphiid wasp *(Myrmosa pacifica),* Antioch sphecid wasp *(Philanthus nasalis),* Antioch andrenid bee *(Perdita scitula antiochensis),* and yellow-banded andrenid bee *(Perdita hirticeps luteocincta).*]

The Contra Costa wallflower and Antioch Dunes evening-primrose are also considered relict desert types which—together with several other plant species—form the basis of the unique sand dune insect community. Both the primrose and wallflower are exclusive hosts to several moths, beetles, and bees on Antioch (although none of them is believed to be limited to this area).

The entire area acquired is within the boundaries of Critical Habitat for the wallflower and primrose (identical for both Endangered plants), designated on August 31, 1978, to protect their range from potentially harmful Federal activities (see the September 1978 BULLETIN). Both plant species were depicted a year ago on U.S. commemorative "endangered flora" postage stamps (see the May 1979 BULLETIN).

The Antioch Dunes evening-primrose is a short-lived biennial with large, white flowers that open at night and then fade to pink. Once relatively common in the Antioch Dunes area, the subspecies is now confined to about 60 acres where it survives most vigoruosly on redeposited wind-blown sand. (Approximately 800 individuals remain.) Where observed in cultivation, primrose seedlings do not grow where adult plants have previously matured unless fresh sand is deposited—a normal process in dune ecosystems undisturbed by man.

Also a biennial, with yellow-orange flowers, the Contra Costa wallflower occurred on several hundred acres a few decades ago. Less than 200 individuals now survive on a few acres, where they exist on stabilized dunes of fine sand and clay sparsely covered with herbs and shrubs or pasture grasses. The species has survived human disturbance, and seems to thrive in mildly disturbed sand (primarily from rototilling).

Threats

Because of the confined, interdependent nature of this dune community, the Antioch ecosystem is particularly vulnerable to human interference.

U.S. Fish and Wildlife Service Photo

Possibly no more than 800 individuals of the Antioch Dunes evening primrose survive today.

Sand mining and the encroachment of weedy exotics (the latter encouraged by fire prevention rototilling) have been the primary destroyers of flora that remained after industrialization of major portions of the dunes in the 1950's. Housing development, agriculture, off-road vehicle (ORV) activity, and clearing for power lines have also caused severe habitat deterioration. Native species faced an additional threat in 1976 when an 84-acre waterfront park was proposed for the dunes. (The State of California withdrew the project in March 1979, because the City of Antioch did not have adequate matching funds at the time.)

Continued sand mining, rototilling, and discing for fire control have reduced the Antioch buckwheat to numbers barely adequate to support the remaining Lange's metalmark colonies,

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PAHRUMP KILLIFISH RECOVERY PLAN APPROVED

The Service has approved a recovery plan for the Endangered Pahrump killifish *(Empetrichthys latos latos)* which occurs only in transplanted populations in Nevada. It is the only fish native to the Pahrump Valley, and is one of two fish which constitute the genus *Empetrichthys*. The other, the Ash Meadows killiifish *(E. merriami)*, became extinct in the late 1940's.

Only about 3 inches in maximum length, the Pahrump kiliifish was historically known only from Manse Springs, where it became extinct in 1975 because of the drying of its habitat. The drying of Manse Springs came as no surprise to those familiar with desert springs, and was even predicted after demands on water in the area had been reviewed. It was that prediction which led to the transplanting of the Pahrump kiliifish and its continued existence today.

The recovery plan calls for the establishment of three sub-populations of the species, each with a minimum of 500 adults. With this level being maintained for three years, the recovery team anticipates the possibility of reclassifying the species as Threatened.

Because the Pahrump kiliifish no longer exists in its natural habitat, the plan's first priority is the protection and management of the transplanted populations. This would take the form of removal of competing exotic species (such as fish and turtles) as well as safeguards against their reintroduction.

New sites will have to be determined for establishing kiliifish populations, as the Shoshone Ponds population is considered only temporary because of its great distance from the species' native habitat. The site given highest priority for reintroduction is the Pahrump's ancestral home, Manse Springs. To prepare for such a reintroduction, the team suggests that a management plan be drawn to include, among other things, removal of exotic species, vegetation and water control, and biological enhancement.

Studies on habitat and the fish itself will have to be conducted prior to development of any management plans. Habitat studies will include (1) determination of habitat productivity, (2) habitat diversity, (3) water chemistry investigation, (4) determination of yearly temperature regime, and (5) determining the volume configuration of the habitat.

Biological investigations of the killifish should include a study of (1) competition with fish, frogs, birds, etc., (2) food and feeding habits, (3) spawning ecology, (4) water temperature preferences, and (5) substrate requirements.

Other activities recommended in the recovery plan include water management at Corn Creek Springs (the other existing transplant site) because of its limited volume. Attention should be given to any controllable factor which may reduce water volume (such as the removal of undesirable aquatic vegetation necessary to prevent excessive evapotranspiration).

Both populations should be censused twice yearly, in March at the beginning of the main spawning season and in late September at the end of the main growing season.

Finally, the recovery plan calls for a public information effort using publications, slide shows, and signs at habitat locations, to achieve support for the restoration of the Pahrump killiifish.

Photo by Doug Selby

A Service-approved recovery plan recommends the reestablishment of the Pahrump killifish.

SERVICE NAMES TWO RECOVERY TEAMS

Two recovery teams, one for the Tennessee purple coneflower *(Echinacea tennesseensis)* and one for Upper Mississippi River bivalves, were appointed by the Service in March.

Serving on the Tennessee Purple Coneflower Recovery Team are Dr. Paul Somers, Leader, Tennessee Heritage Program; Dr. Elsie Quarterman, plant ecologist; Dr. Thomas Hemmerly, Department of Biology, Middle Tennessee State University; and Dr. Robert Farmer, plant physiologist, Tennessee Valley Authority.

The Upper Mississippi River Bivalves Recovery Team includes Dr. Edward M. Stern, Leader, University of Wisconsin; Emanuel Worth, commercial clammer; Bill Bertrand, Illinois Department of Conservation; Michael J. Vanderford, U.S. Fish and Wildlife Service; Robert Whiting, U.S. Army Corps of Engineers; and Howard Krosch, Minnesota Department of Natural Resources.

Service Acquires Antioch Dunes

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and the continuing invasion of weedy plants has reduced available space for potential re-establishment of the host buckwheat.

While freshly deposited sand is necessary for the survival of the Antioch Dunes evening primrose, the area has been so severely disrupted that fresh, pure sand may not be available in large enough quantities to support adequate populations. Disturbed areas colonized by weeds are no longer suitable for the establishment of primrose seedlings.

Weedy exotics, direct habitat destruction, and ORV activities are also primary factors in the decline of the wallflower. Pollinators for both the primrose and wallflower may also be in short supply with the continued loss of plant life needed to support them.

Protecting the Other Dunes

Although much of the fragile Antioch ecosystem has been preserved through acquisition, adjacent areas important to the survival of all three listed species are also in need of protection.

Significant numbers of both protected plants and the butterfly occur on about 13 acres of largely unimproved land owned by Pacific Gas and Electric (PG&E), which has right of way for transmission lines through the area, and on another 10 acres now owned by Domtar Gypsum. The Service is hoping to negotiate cooperative management or easement agreements with these parties to promote conservation efforts on the contiguous dune areas. (In the meantime, a concerned salvage operator has been attempting to protect the PG&E property from detrimental activities.)

ORV's—A Continuing Threat?

Management plans for the acquired area—to be administered as part of the Service's San Francisco Bay National Wildlife Refuge complex—will soon be formulated. But, in the three weeks since the Service acquisition, considerable controversy has risen over the matter of public use of Antioch Dunes.

Conservationist organizations and a number of other interested parties are concerned that continuing ORV activities could devastate the remaining dune community. While measures have been taken to close access roads to the newly acquired area, conservationists like Alice Howard of the California Native Plant Society (CNPS) are urging refuge officials to fence off the dunes. "The plants and animals here cannot take much more stress and still be expected to recover," says Howard, who believes blame will inevitably fall with the Service for failing to move swiftly in protecting the dunes from vehicular vandalism. Her view is shared by a number of botanists as well as concerned entomologists like Dick Arnold, who sees a permanent barrier as the only way to insure the otherwise precarious existence of the Lange's metalmark butterfly. "Unfortunately," Arnold says "public ownership has given many people the idea that they have an automatic right to run around the area with their ORVs. I'm afraid make-shift barricades will only temporarily halt this disastrous activity."

But Larry Warden, assistant refuge manager based at Fremont, feels that most of the immediate problems have been resolved. "We've blocked the access with pilings and cables, and have a patrolman out at all times. We will soon have the most sensitive areas posted as closed to the public." Warden says a number of warnings and tickets have been issued, and

Photo by Tom Strekal

Sand mining has reduced this once massive dune to a fraction of its original size. (Looking west, Domtar Gypsum and the west powerline right-of-way are situated not far from the "Sardis" parcel.)

that these interim measures have already begun to reduce vandalism.

Another refuge spokesperson expressed concern over putting money into fencing that could, and likely will, be removed by people who insist on driving on the dunes. "We're contacting ORV clubs and the media in nearby areas, and are planning a volunteer interpretive program to help educate the public. Our constrained budget necessitates this more practical approach to protecting the area, at least until we can agree on a proper management plan." Warden says only $10,000 has been budgeted for manpower and materials to manage this area through the remainder of this fiscal year—hardly enough for the purchase of an adequate chain-link fence.

CNPS takes issue with this approach, however. "We cannot afford a lengthy period of 'sweet-talking' in the hope of educating those who apparently prefer the thrill of maneuvering vehicles through sand. There is not enough left for any portion of this ecosystem to be expendable."

Still another view is held by Antioch's City Council, which is concerned that the Service actually acquired more area than is needed to protect the dune community. According to the Antioch mayor, "this additional acreage . . . could more properly be used for industrial development." The City Council has requested that any area "not actually required for reserve purposes be set aside for industrial development and made available to private industry."

Photo by Paul Opler

Endangered: the Contra Costa wallflower.

PLAN FOR ANTIOCH DUNES RECOVERY

A multi-species plan to bolster the recovery of the Lange's metalmark butterfly, Antioch Dunes evening-primrose, and Contra Costa wallflower—all components of the fragile Antioch sand dune community—has been approved by the Service.

The prime objective of the recovery plan is to protect the Antioch Dunes ecosystem to allow the restoration and delisting of these three species by 1990. The major strategy outlined in the plan is protection of this severely threatened habitat—partially accomplished through the Service's recent acquisition of 55 acres of the Antioch Dunes (see accompanying feature).

The recovery plan recommends that studies be conducted to determine biological requirements of Lange's metalmark butterfly, Antioch Dunes evening-primrose, Contra Costa wallflower, and Antioch buckwheat (on which the butterfly's larvae feed). According to the plan, information is needed on the effects of weedy exotics and possible methods to eradicate them.

Addressing the current critical endangerment of these species, the recovery team calls for development and implementation of preliminary as well as long-term management and strategy plans. Preliminary plans, as outlined by the team, would deal with fire and weed management techniques which have been detrimental to the species, control of competing exotic plants, and public access affecting the species. An immediate management task should be the protection of existing dunes and the possible reconstruction of dunes to provide needed habitat, according to the team.

To determine the success of preliminary and long-term recovery activities, the populations of Lange's metalmark butterfly, Antioch Dunes evening-primose, Contra Costa wallflower, and Antioch buckwheat should be monitored to determine actual numbers and reproductive success. Also, the plan suggests the monitoring of the status of dune habitat in and around the general area to determine the effectiveness of management activities.

As with all recovery plans, this one makes recommendations for a public information campaign to improve awareness of and support for plan implementation. This seems to be especially critical with the Antioch Dunes Recovery Plan because of an existing controversy over public use of the dunes. One recommended aid already under consideration is a sign posted in the area which would include a brief history of the Antioch Dunes ecosystem and list regulations governing the use of the area by the public.

Rulemaking Actions

March 1980

CRITICAL HABITAT PROPOSED FOR THREE BUTTERFLIES

The Service proposes to designate Critical Habitat for two butterflies native to California and one Oregon butterfly previously proposed for Federal listing.

Critical Habitat had been proposed for both the Callippe silverspot butterfly *(Speyeria callippe callippe)* and Oregon silverspot butterfly *(S. zerene hippolyta)* along with proposals to list these insects respectively as Endangered and Threatened (F.R. 7/3/78—see the August 1978 BULLETIN). But, in accord with substantial requirements brought with 1978 Amendments to the Endangered Species Act, the Critical Habitat portions of these proposals were subsequently withdrawn (F.R. 3/6/79—see the April 1979 BULLETIN).

The Palos Verdes blue butterfly *(Glaucopysche lygdamus palosverdesensis)* was also proposed for listing as Endangered on July 3, 1978, and its Critical Habitat is now proposed for the first time.

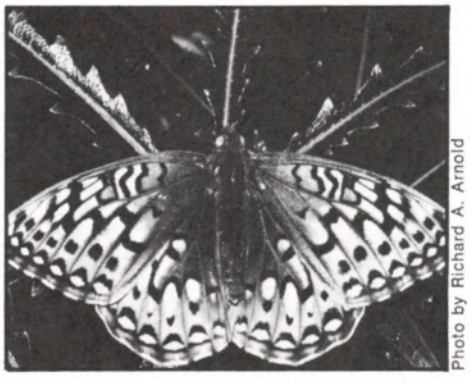

Photo by Richard A. Arnold

The Callippe silverspot is one of three butterflies for which Critical Habitat has been proposed.

Callippe Silverspot

Formerly known from San Francisco and San Mateo Counties, the only true remaining populations of the Callippe silverspot butterfly now occur in the eastern portions of the San Bruno Mountains. (The San Francisco population has been extirpated due to urban development.)

Major threats to surviving populations include projected housing development and increasing recreational activities (a county park is slated for the area) that would directly eliminate portions of the butterfly's essential habitat. Increased trampling, collecting, and disturbance from off-road vehicles would also threaten the existence of the insect.

Changes in fire management (periodic fires may be necessary to maintain the grassland community on which the butterfly depends) would also result from increased human residence and recreational use.

While the previously proposed Oakland Zone has been deleted from this new proposal (as populations of silverspot butterfly in that area are no longer believed to represent Callippe silverspots), additional grasslands on the extreme eastern portions of the main ridge of San Bruno Mountain have been added based on additional information on the species' habitat needs.

Oregon Silverspot

The Oregon silverspot formerly occurred in salt spray meadows from Washington to Oregon. The status of the Washington colony is now uncertain, while most Oregon populations have been extirpated by real estate development. (One of the areas previously proposed as Critical Habitat has since been developed for housing.)

Direct loss of habitat by land clearing, trampling from increased recreational use, and the introduction of weedy exotics that could change the nature of the plant community on which the butterfly depends are all factors that could threaten the survival of the Oregon silverspot.

The salt spray meadow between Big Creek and Rock Creek in Lane County—an area large enough to support the host plant violet essential to the butterfly's survival—has been proposed as Critical Habitat.

Palos Verdes Blue

This butterfly was once known from four restricted localities on the Palos Verdes peninsula. The Palos Verdes blue butterfly has been extirpated from one area due to housing development, and two other localities have been adversely affected by weed control practices that threatened the butterfly's host plant. The rototilling of weeds for fire prevention and other similar land management practices in addition to housing development and increased recreational use (especially at one locality that has been designated a city park) would threaten the continued existence of the Palos Verdes blue butterfly.

Three areas within Los Angeles County containing the coastal chaparral colonies of *Astragalus trichopodus leucopsis* (the butterfly's only host plant) have been proposed for designation as Critical Habitat.

Public Meetings/Hearings

Public meetings on all three proposals were scheduled in mid-April, and public hearings are to be held as follows:

- *Callippe silverspot:* May 1, 7:30 p.m., Plaza Airport Inn, Millbrae, California.
- *Oregon silverspot:* April 29, 7:30 p.m., Plaza Airport Inn, Millbrae, Newport, Oregon.
- *Palos Verdes blue:* May 2, 7:30 p.m., Public Personnel Building, Rancho Palos Verdes, California.

Comments/Data Solicited

The Service has drafted impact analyses on all three proposals, and believes at this time that economic and other impacts of these proposed actions are insignificant (under provisions of the 1978 Amendments and other applicable Federal laws). Upon completion, final impact analyses will serve as the bases for determinations as to whether exclusion of any areas from Critical Habitat designation is warranted (for economic impact or other reasons).

Comments, as well as biological and economic data, in response to these proposals should be submitted by May 27, 1980 (for the Palos Verdes blue and Oregon silverspot), and May 28, 1980 (for the Callippe silverspot), to the Director (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

CRITICAL HABITAT PROPOSED FOR FOUR SAN MARCOS RIVER SPECIES

Critical Habitat has been proposed by the Service for two species of fish, a salamander, and a plant dependent upon maintenance of portions of the San Marcos River in Texas (F.R. 3/19/80).

The proposed determinations for the San Marcos gambusia (*Gambusia georgei*) and the San Marcos salamander (*Eurycea nana*) are reproposals of Critical Habitat designations proposed on July 14, 1978 (see August 1978 BULLETIN), but later withdrawn in accord with 1978 Amendments to the Endangered Species Act (see April 1979 BULLETIN). Critical Habitat for the fountain darter (*Etheostoma fonticola*) and the Texas wild rice (*Zizania texana*) are proposed for the first time.

San Marcos Salamander

Proposed for listing as a Threatened species (with special regulations allowing controlled taking under State law) on July 14, 1978, this amphibian is threatened by the potential lowering of water tables affecting Spring Lake. Should Spring Lake become either dry or intermittent, algal mats essential to the salamander's food source and shelter could be exposed, leading to destruction of its only habitat. (Skin divers could also disrupt algal mats and the bottom of the lake, exposing the amphibians to increased predation.)

The Critical Habitat proposal includes Spring Lake and approximately 50 meters downstream of the San Marcos River, the entire known range of the species.

San Marcos Gambusia

Also proposed as Endangered on July 14, 1978, the San Marcos gambusia is presently known only from a short segment of the San Marcos River. Only 19 individuals were found during a 1979 survey—an indication of the species' sensitivity and habitat specificity. The fish prefers open areas away from stream banks with a minimum of aquatic vegetation over a mud bottom with little current. Any actions that would increase vegetation, disrupt the mud bottom, or alter the temperature regime could easily eliminate the species.

A small, 1.5 km section of the San Marcos River below Spring Lake has been proposed as Critical Habitat.

Fountain Darter

Listed as Endangered on October 13, 1970, the fountain darter was originally known from the San Marcos and Comal Rivers in Texas. The Comal River population was extirpated in the mid-1950's due to reduced flows. The species presently occurs in Spring Lake and in portions of the San Marcos River, although the fish has been eliminated from a lower portion of the river (apparently due to a small impoundment).

Adult and young fountain darters prefer areas with rooted aquatic vegetation, which grows close to the substrate, with filamentous algae present. Activities which would reduce or eliminate darter populations include impoundments, excessive withdrawal of water, pollution, and any other actions that would destroy or reduce aquatic vegetation in Spring Lake or the San Marcos River.

Its entire known range (Spring Lake and its outflow and the San Marcos River downstream to about just below the Interstate Hwy. 35 bridge) has been proposed as Critical Habitat.

Texas Wild Rice

Listed as Endangered on April 28, 1978 (see the May 1979 BULLETIN), the Texas wild rice was once known from Spring Lake and its outflow and the San Marcos River. Populations have been significantly reduced to a small area along a 1.5 mile stretch of the river.

The species is threatened because of its extreme vulnerability due to its limited range, its apparent inability to reproduce sexually in its native habitat, and the possibility of hybridization. Any action which would significantly alter the flow of water quality of the San Marcos River could adversely modify its essential habitat, as the species is adapted to conditions of clear water, uniform annual flows, and constant temperatures. Dredging, bulldozing, bottom plowing or disturbances from harrowing, cutting, or intensive collecting—the latter identified as factors in the decline of the species—would threaten its survival.

The species' current and former range and a small amount of habitat downstream from existing colonies for possible population expansion (to the river's confluence with the Blanco River) have been proposed as Critical Habitat.

Public Hearing Scheduled

The Service announces that a public hearing on the proposal will be held at the Student Union Bldg., Southwest Texas State University, in San Marcos, Texas, on May 12 at 7:00 p.m. The hearing is being held subsequent to a public meeting scheduled for April 8 in San Marcos.

Comments/Data Solicited

The Service has drafted an impact analysis, and believes at this time that economic and other impacts of this proposed action are insignificant (under provisions of the 1978 Amendments and other applicable Federal laws). Upon completion, a final impact analysis will serve as the basis for a determination as to whether exclusion of any area from Critical Habitat designation is warranted (for economic impact or other reasons).

Comments, as well as biological and economic data, in response to this proposal should be submitted by May 19, 1980, to the Director (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

Reference Note

All Service notices and proposed and final rulemakings are published in the *Federal Register* in full detail. The parenthetical references given in the BULLETIN—e.g., (F.R. 1/17/80)—identify the month, day, and year on which the relevant notice or rulemaking was published in the *Federal Register*.

ENDANGERED STATUS AND CRITICAL HABITAT PROPOSED FOR ROBBINS' CINQUEFOIL

The Service has published a proposal to list a rare northeastern plant, the Robbins' cinquefoil (*Potentilla robbinsiana*), as Endangered and to designate the species' limited habitat for Federal protection (F.R. 3/24/80).

Robbins' cinquefoil was cited by the Smithsonian Institution in its July 1, 1975, report to Congress as in need of protection, and was included in a subsequent Service proposal (F.R. 6/16/76) to determine approximately 1,700 vascular plants as Endangered. In line with 1978 Amendments to the Endangered Species Act, requiring that all proposals more than two years old (following a one-year grace period) be withdrawn, the Service published notice on December 10, 1979, withdrawing its June 1976 proposal. At this time, the Service has sufficient new information to repropose this species for listing, and its Critical Habitat is hereby proposed for the first time.

Photo by Garrett E. Crow

A member of the rose family, the Robbins' cinquefoil forms tufted rosettes bearing yellow flowers. The perennial and its reduced habitat are threatened by trampling and other factors.

Status and Declining Factors

This small perennial occurs in alpine areas of New Hampshire and Vermont, where its preferred habitat is nearly barren fell-fields above 4,000 feet.

Historically, the Robbins' cinquefoil is known from two separate localities in the White Mountains of New Hampshire and from one recently discovered locale in Vermont. The plant presently occurs in greatly reduced numbers in only one New Hampshire site (on U.S. Forest Service lands) and on private property in Vermont. Two populations known from the Franconia Ridge of the White Mountains have apparently been destroyed due to hiker impacts.

Trampling as the result of increasing hiker traffic along the Appalachian Trail (bisecting both New Hampshire sites) continues to be the primary threat to remaining populations in the Presidential Range of the White Mountains. The fell-field habitat occupied by the cinquefoil offers no obstacle to hikers wandering off the trail, or to illegal campers and other groups that can easily crush plants or dislodge the stony surface essential to the maintenance of the plant's habitat. Once disturbed these fragile alpine areas and plant communities take many years to recover.

Only a fraction of the original population of Robbins' cinquefoil remains at the second New Hampshire site, and all plants within 2 meters of the Appalachian Trail have been eliminated. (Further destruction may also occur from projected widening of the hiker travel zone in this area.)

Trampling is also considered a threat to the population in Vermont, which has received little protection planning.

Other factors contributing to the decline of the species include overcollecting and the plant's extreme vulnerability to harsh climates and drought due to its declining numbers.

Critical Habitat designation has been proposed for the area in the White Mountains where the species now occurs (exclusive of the summit of Mt. Washington), although additional habitat suitable for reintroduction, management, and natural expansion may be proposed in the future.

Comments/Data Solicited

The Service has drafted an impact analysis, and believes at this time that economic and other impacts of this proposed action are insignificant (under provisions of the 1978 Amendments and other applicable Federal laws). Upon completion, a final impact analysis will serve as the basis for a determination as to whether exclusion of any area from Critical Habitat designation is warranted (for economic impact or other reasons).

Comments, as well as biological and economic data, in response to this proposal should be submitted by May 23, 1980, to the Director (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

The Service will hold a public meeting on the proposal on April 28, at 7:30 p.m., at the YMCA in Concord, New Hampshire.

KENTUCKY CAVE SHRIMP NOTICE

The Service has issued an advance notice of its intent to repropose the Kentucky cave shrimp (*Palaemonias ganteri*) for listing as either an Endangered or Threatened species (F.R. 3/28/80). The cave shrimp was previously proposed for listing as a Threatened species (F.R. 1/12/77), but the proposal was withdrawn to comply with the 1978 Endangered Species Act Amendments (F.R. 12/10/79).

A petition to list the species reports its first discovery since 1967 (in the Flint Mammoth Cave System, Edmonton County, Kentucky) and describes threats to its existence. The Service

has determined that this petition presents sufficient new data to warrant a reproposai.

interested persons having knowledge of the Kentucky cave shrimp or its habitat requirements, or information regarding current and potential threats to its continued existence, are invited to submit factual information to the Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, D.C. 20240.

FIVE FOREIGN REPTILES LISTED AS ENDANGERED

Three lizards and two snakes threatened with extinction on the foreign islands where they occur have been designated by the Service as Endangered species (F.R. 3/20/80).

All five species—the San Esteban island chuckwalla (*Sauromalus varius*), Fiji island banded iguana (*Brachylophus fasciatus*), Fiji crested iguana (*Brachylophus* sp.), and two Round island boas (*Bolyeria multicarinata* and *Casarea dussumieri*) had been proposed for listing on November 2, 1979 (see the December 1979 BULLETiN).

Chuckwalla

The population of the San Esteban island chuckwalla, a large lizard found only on the island of its name in the Gulf of California, is estimated to number fewer than 4,500. Many specimens have been removed for the exotic pet trade, particularly since the lizard's main habitat is a single arroyo easily accessible by road. The species is not now protected by international trade agreements, although a collecting permit is required by Mexico. It is anticipated that listing the chuckwalla will provide additional protection under the provisions of the Endangered Species Act by imposing added restrictions on importation to the U.S.

Iguanas

The Fiji island banded iguana and Fiji crested iguana are found only in the Pacific, the former on several islands in Fiji and Tonga, and the latter—a recently discovered species—only on a small, remote island in the Fiji group. Both species are threatened by elimination of habitat through tree removal by humans and vegetation destruction by feral goats. in addition, the banded iguana faces the threat of commercial exploitation for the exotic pet trade. Other problems facing these colorful lizards are predatlon by feral cats and killing by native Fijlans.

Boas

The Round island boas are the sole surviving members of the subfamily *Bolyerinae*, a group of primitive boas. There have been only six sightings of one species since 1975, and the other species is estimated to number no more than 75. These snakes are mainly threatened by deterioration of their palm forest habitat due to destruction of vegetation (causing erosion) by the rabbits and goats brought to Round island in 1840.

Although the four Fiji and Round island species are protected in their native countries, their low populations, remote habitats, and narrow ranges could undermine their precarious hold on existence. Listing of the reptiles will emphasize the importance of protection to residents of the Fiji group, Tonga, Mexico, and Mauritius, and may make U.S. funds and wildlife expertise available to aid the conservation programs of these countries.

SHOSHONE SCULPIN UNDER REVIEW

A native idaho fish, the Shoshone sculpin (*Cottus greenei*), is the subject of a status review being conducted by the Service.

The species is endemic to the Hagerman Valley in southern idaho and is restricted to short tributaries of the Snake River in the "Thousand Springs" formation, a spring system existing between Twin Falls and Bliss on the north bank of the Snake River Canyon. it is likely that the Shoshone sculpin had populations in the free-flowing Snake River prior to construction of Dams, the river having served as a dispersal corridor for the species. Lower Salmon Falls Dam and Upper Salmon Falls Dam impounded most of the Snake River within the species' distribution, and Bliss Dam impounded water from a site below Bliss up to the down-river end of the Thousand Springs tributaries. Proposed water projects may adversely affect many of the springs now inhabited by the sculpin.

The Service is seeking comments from the Governor of idaho, and invites other interested parties to submit any factual information and comments to the Director (OES), U.S. Fish and Wildlife Service, Department of the interior, Washington, D.C. 20240, by May 27, 1980.

SERVICE REVIEWS BONNEVILLE CUTTHROAT TROUT

in response to letters and information from the Desert Fishes Council and the Bonneville Chapter of the American Fisheries Society, the Service is undertaking a status review of the Bonneville cutthroat trout (*Salmo clarki utah*) to determine if a proposal to list the species as Endangered or Threatened is warranted.

The species is known to occur in Lincoln County, Wyoming, White Pine County, Nevada, and Beaver, Jaub, Salt Lake, Sevier, and Washington Counties in Utah. Factors affecting the status of the Bonneville cutthroat include hybridization with non-native trouts and habitat destruction due to agricultural practices, activities associated with mining, and livestock grazing (which destroys and degrades riparian vegetation and streambank soil stability resulting in sltlatlon, stream channel alteration, and loss of cover).

The Service is seeking comments from the Governors of Nevada, Wyoming, and Utah. Other interested parties are requested to submit comments and factual information to the Director (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240, by May 27, 1980.

Seizure and Forfeiture Procedures Revised

Revised seizure and forfeiture procedures, to be used by the Service in enforcing the Endangered Species Act and several other wildlife laws, were recently issued in a final rulemaking (F.R. 4/19/80). These regulations clarify prior procedures, which will be continued, and implement the forfeiture provisions of the "customs laws."

The adopted customs laws (certain provisions of the Tariff Act of 1930) allow property having an appraised domestic value not in excess of $10,000 to be forfeited through administrative proceedings conducted by the Department of the Interior. The regulations also provide procedures for filing petitions both to remit forfeiture and to restore the proceeds of forfeited property disposed of according to the law. More efficient transactions involving seizure/forfeiture and petitioning procedures should be effected since, in many instances, these regulations now allow these processes to be handled within the Department.

PUBLIC MEETINGS/HEARINGS

Due to the often unavoidable short notice in scheduling public meetings and hearings (in compliance with 1978 Amendments to the Endangered Species Act) for certain listing and Critical Habitat proposals, we regret that we cannot always relay adequate notice to our readers. In future issues, however, we will attempt to provide available information through this column. Due to space limitations and uncertainty of *Federal Register* publication dates, summaries of pertinent proposed rulemakings may not necessarily accompany meeting notices, but may be included in a subsequent issue of the *Bulletin.*

Species/Action	Affected State(s)	Locations of Meetings/Hearings	Date	Time
Robbins' cinquefoil: proposed E and C.H.	NH	Meeting: YMCA, Concord	4/28/80	7:30 p.m.
Oregon silverspot butterfly: proposed C.H.	OR	Hearing: State Marine Science Center, Newport	4/29/80	7:30 p.m.
Callippe silverspot butterfly: proposed C.H.	CA	Hearing: Plaza Airport Inn, Millbrae	5/1/80	7:30 p.m.
Palos Verdes blue butterfly: proposed C.H.	CA	Hearing: Public Personnel Bldg., Rancho Palos Verdes	5/2/80	7:30 p.m.
Four San Marcos River species (2 fishes, 1 salamander, 1 plant): proposed C.H.	TX	Hearing: Student Union Bldg., Southwest Texas State University, San Marcos	5/12/80	7:00 p.m.
Four Rio Yaqui River Fishes: proposed C.H.	AZ	*Meeting: Cochise College, Douglas	6/3/80	1:30 p.m.
Delta green & California elderberry longhorn beetles: proposed C.H.	CA	Meeting: Tennis Club, 4120 Chiles Road, Davis	5/22/80	7:30 p.m.
		Hearing: (as above)	6/12/80	7:30 p.m.
Mojave rabbitbush longhorn beetle: proposed C.H.	CA	Meeting: Essex House, 44916 N. 10th St. W., Lancaster	5/23/80	7:30 p.m.
		Hearing: (as above)	6/13/80	7:30 p.m.

** Tentative*
E—Endangered
T—Threatened
C.H.—Critical Habitat

Rulemaking Actions

COLUMBIA TIGER BEETLE STATUS REVIEW

The Service is reviewing the status of the Columbia tiger beetle *(Cicindela columbica)* to determine whether it should be proposed for listing as an Endangered or Threatened species (F.R. 3/3/80).

Formerly occurring on sandbars in the Columbia and Snake Rivers in Washington, Oregon, and Idaho, the beetle has been extirpated from these rivers because of water impoundments. Dam construction on the lower Salmon River in Idaho could destroy the only known remaining populations of the species.

The Service is seeking the views of the Governors of Oregon, Idaho, and Washington, and is soliciting from them information on the status of the Columbia tiger beetle. Other interested parties are invited to submit any factual information, especially publications and written reports, to the Director (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240, on or before June 2, 1980.

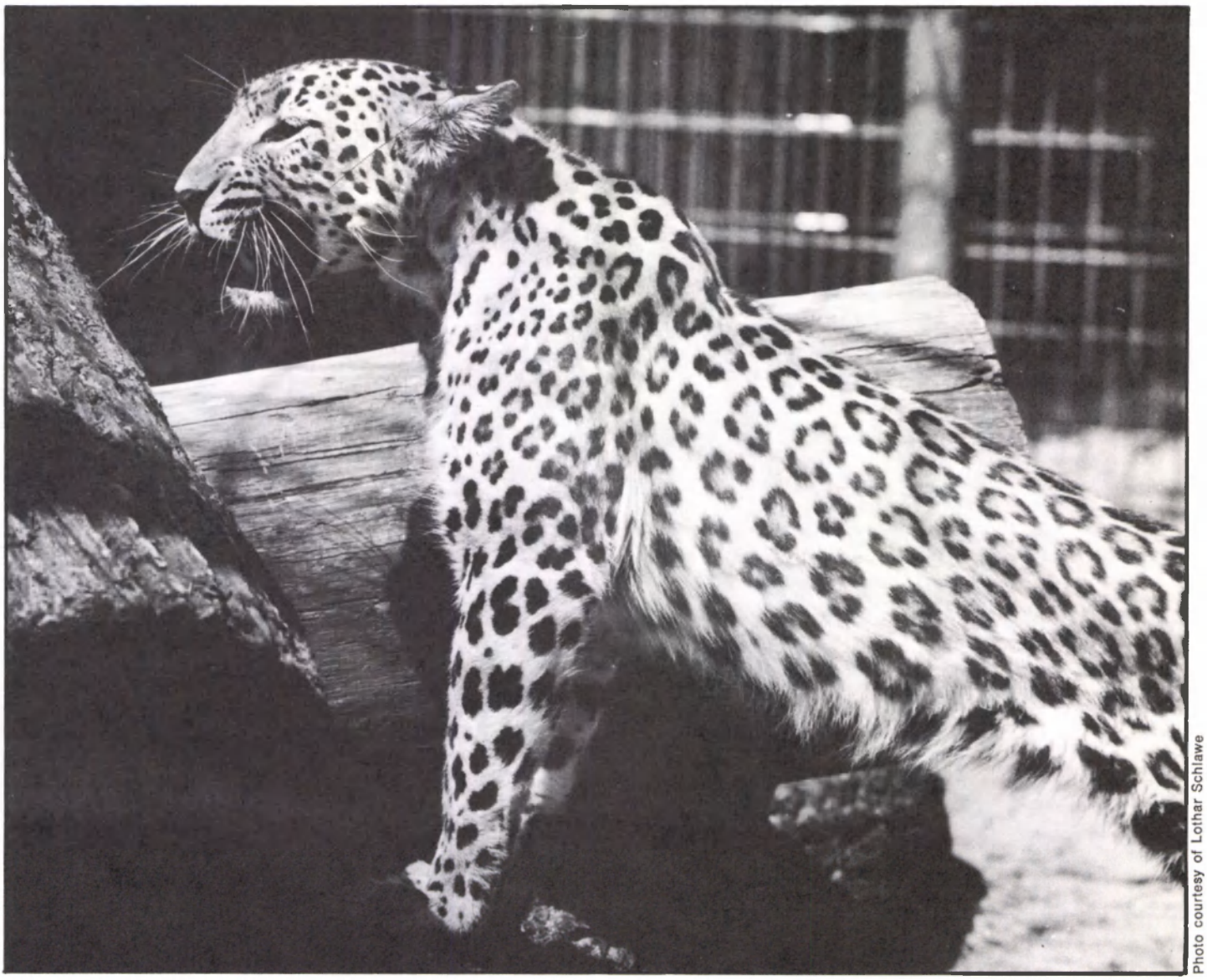

Photo courtesy of Lothar Schlawe

The Service has proposed reclassification from Endangered to Threatened status for the leopard, while urging its retention on Appendix I of CITES as a safeguard against commercial trade.

Leopard

Continued from page 1

Background

The leopard is the most widely distributed of any cat species. It occurs throughout most of Africa, and from Asia Minor to China, Korea, Japan, and Java; it is also found in India, Ceylon, and Southeast Asia. Nevertheless, widespread poaching and uncontrolled trade in its fur posed such a threat to the leopard that the Service listed it as an Endangered species in 1972, under the Endangered Species Conservation Act of 1969. In preceding years, thousands of the prized spotted pelts had been imported annually into the United States alone. The Service felt that, although the leopard occurs throughout a large area, no species of large cat could withstand such an enormous drain on wild populations. It became clear that protection was necessary, but the 1969 Act did not provide for classification as Threatened; therefore, based on the best biological data available at the time, the Endangered category was chosen. Importation of leopard fur was brought to an abrupt halt, and only a few live specimens have been allowed into the U.S. for propagation or scientific purposes since 1972.

Three major studies on the leopard have been conducted since the 1972 listing, and the results indicate that populations are stable or increasing in most sub-Saharan countries. The Service believes that there is an absolute minimum of 233,050 leopards throughout the entire area, with 1,155,000 being a "realistic" figure. On the basis

Continued on page 16

GPO 311-311

Leopard

Continued from page 15

of these population estimates, and because there is now an international treaty regulating trade in leopards and their products, it is thought that the Threatened classification under the 1973 Act would more accurately reflect the cat's status.

Proposed Action

Commercial traffic in leopard products, still a potential threat to wild populations, would continue to be banned under the Threatened classification, although permits to import live animals could be granted for scientific, propagational, educational, and zoological exhibition purposes. Restrictions against importation of legally-taken sport hunting trophies, however, would be eased somewhat in accordance with provisions under CITES.

Permits from both the country of origin and the importing country would be required under CITES before a trophy could enter the U.S. Applications would only be accepted on a case-by-case basis, and would not be approved unless scientific findings show that the activity or its purpose will not be detrimental to the survival of the leopard in the wild.

The Service plans to publish a recommendation that the leopard be kept on Appendix I of the Convention. If the leopard is moved to the less restrictive Appendix II, however, the Service may be required to reconsider its status under the Act.

The leopard is killed indiscriminately in some parts of Africa because of predation on livestock, and it is thought that allowing a limited amount of sport hunting would actually benefit this species by creating an incentive for its conservation. As the cat gains some economic value, countries might begin to manage it more carefully as another natural resource.

The proposal, which has been under consideration for several years, would reclassify the leopard as Threatened only in sub-Saharan Africa (with the exception of Somalia, where the current Endangered classification would be retained). It would remain listed as Endangered throughout all other portions of its range.

Comments Requested

The Service welcomes comments and additional data pertinent to the proposal from all interested parties. They should be submitted by June 24, 1980, to the Director (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

BOX SCORE OF SPECIES LISTINGS

Category	Number of Endangered Species			Number of Threatened Species		
	U.S.	Foreign	Total	U.S.	Foreign	Total
Mammals	35	251	286	3	21	24
Birds	67	145	212	3		3
Reptiles	11	55	66	10		10
Amphibians	5	9	14	2		2
Fishes	29	11	40	12		12
Snails	2	1	3	5		5
Clams	23	2	25			
Crustaceans	1		1			
Insects	6		6	2		2
Plants	49		49	7	2	9
Total	228	474	702	44	23	67

Number of species currently proposed: 35 animals (1 plant)
Number of Critical Habitats listed: 35
Number of Recovery Teams appointed: 68
Number of Recovery Plans approved: 32
Number of Cooperative Agreements signed with States:
34 (fish & wildlife)
4 (plants)

March 31, 1980

ENDANGERED SPECIES TECHNICAL BULLETIN

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